OIL AND GAS COMMISSION

Summary of Oil and Gas Activities and Results in British Columbia as of December 31, 2002

October 1, 2003

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HIGHLIGHTS

Industry

British Columbia attracted high levels of industry activity during the 2002 calendar year. Some of the noteworthy points were:

- Industry continued to devote considerable effort and resources to exploring the Devonian formation in search of pools similar to the Slave Point at Ladyfern. To date, these efforts have been rewarded with significant reserves being discovered in several areas, some of which remain confidential. These exploration efforts have been concentrated to the west-southwest of Ladyfern and suggest the play may extend to the Foothills.

- Both the new Kwoen facility, which sweetens gas in the Pine River plant gathering system, and the new pipeline, which gives access to transportation in Alberta, support development in Ojay and nearby areas. The Commission has booked significant new reserves in the Grizzly South and Ojay areas as a result of activity in this region. Additional activity is expected to take advantage of the increased access to the Pine River Plant and transportation to market.

- Industry maintained a relatively high pace of drilling activity with 427 gas wells and 40 oil wells having been drilled, but these activity levels showed significant decreases from the 2001 figures of 594 gas wells and 75 oil wells.

- In terms of the number of wells drilled, the Jean Marie is becoming an activity focus. The formation is present throughout the northeastern region of the province and appears to be productive over most of its areal extent. The Gunnell Creek, Elleh, and Sierra areas in particular are attracting industry attention. More drilling and infrastructure development in these areas is anticipated in the immediate future.

- Direct revenue to the province from industry activities totalled $1.23 billion, including royalties, tenure fees, and disposition bonuses. This revenue figure is the third highest provincial oil and gas revenue in the province's history.

Oil and Gas Commission

The Oil and Gas Commission (OGC) continued to fulfill its mission statement by regulating industry activity to ensure appropriate development of the province's oil and gas resources for the benefit of British Columbians. In addition to conducting its regular duties, the OGC devoted considerable effort to process improvements. The OGC:

- Implemented a pilot project to streamline the permit application process through the use of General Development Permits (GDP). The pilot project aims to simplify the application process by having all applications relevant to a company's project submitted as one General Development Permit. The environmental benefits of a GDP approval program include improved planning of site access and operator coordination, as well as managing cumulative impact.

- Launched the Oil and Gas Practice Advisory Group (PAG). The PAG consists of a steering committee and eight work teams. The work teams are responsible for addressing specific concerns focused on issues surrounding drilling, operations, maintenance, design, safety construction, and public involvement and for making recommendations to the steering committee. The OGC has committed to implement 80% of the recommendations.

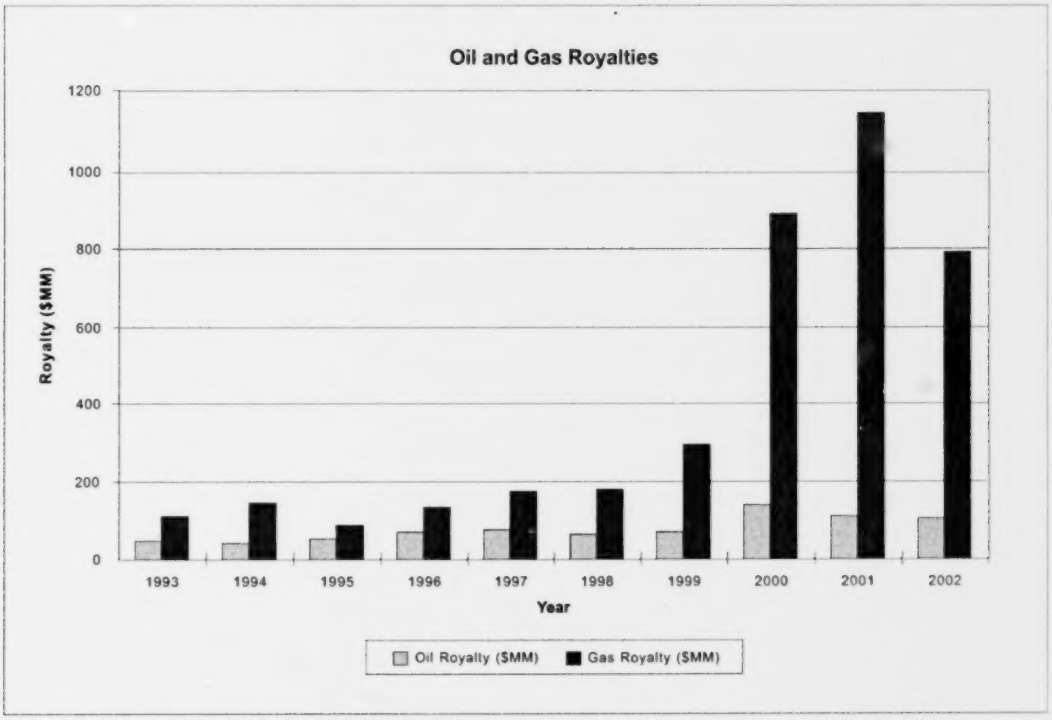
- Streamlined the application submission process by reducing the forms and checklists from 67 to 18 by eliminating duplications and unnecessary information. These efficiencies included the elimination of:
  - Pipeline and access road questionnaires;
  - Duplication of information in the Operations Engineering Technical review package for pipeline and facility applications;
  - Requirement for submission of Woodlot Tenure Holder Agreements and Range Tenure Agreements prior to permit approval;
  - Unnecessary information on Crown Land Application and Campsite Questionnaire; and
  - Notification letters for pipelines, power lines and road crossings.

- Issued a Public Involvement Guideline that provides an overview of public involvement principles, and includes a table specifying minimum distance consultation requirements.

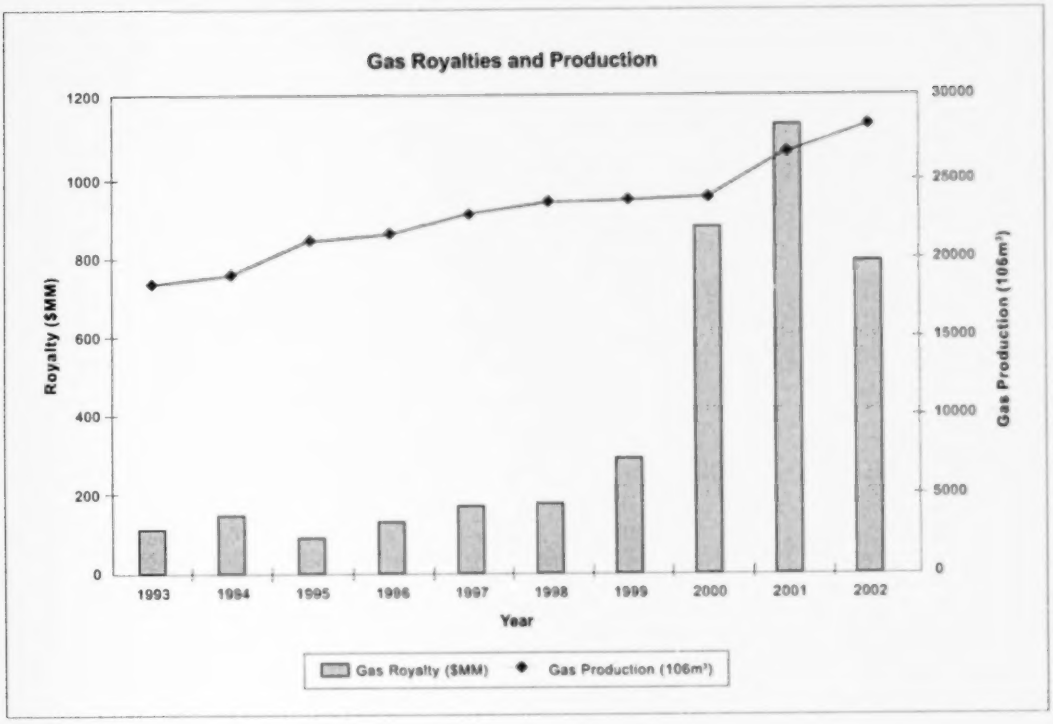
Activities

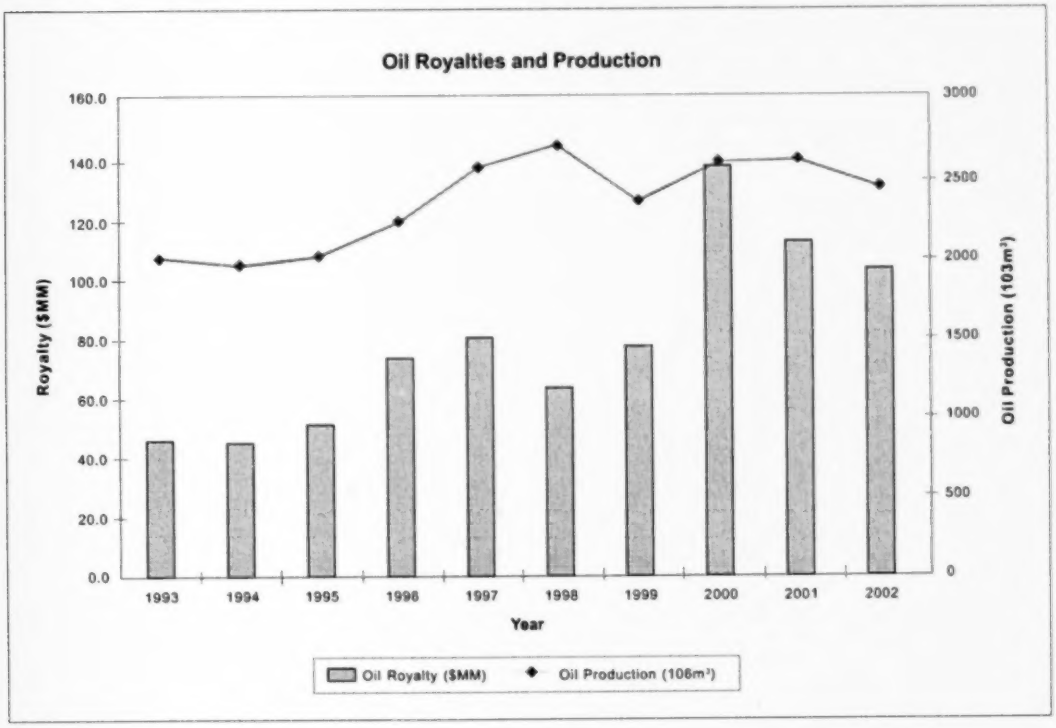
Petroleum and Natural Gas Title Holdings and Royalties

Record numbers of leases and drilling licences were active as of December 31, 2002. Revenue from disposition bonuses and fees, including rental, was the second highest in the province's history, but down 31% from the 2001 record. The 2001 revenue was heavily influenced by the activity at Ladyfern. The 2002 revenue figures may be indicative of the confidence industry has in BC oil and gas on a more 'steady-state' basis, and are considered to bode well for continuing development of the industry in BC.

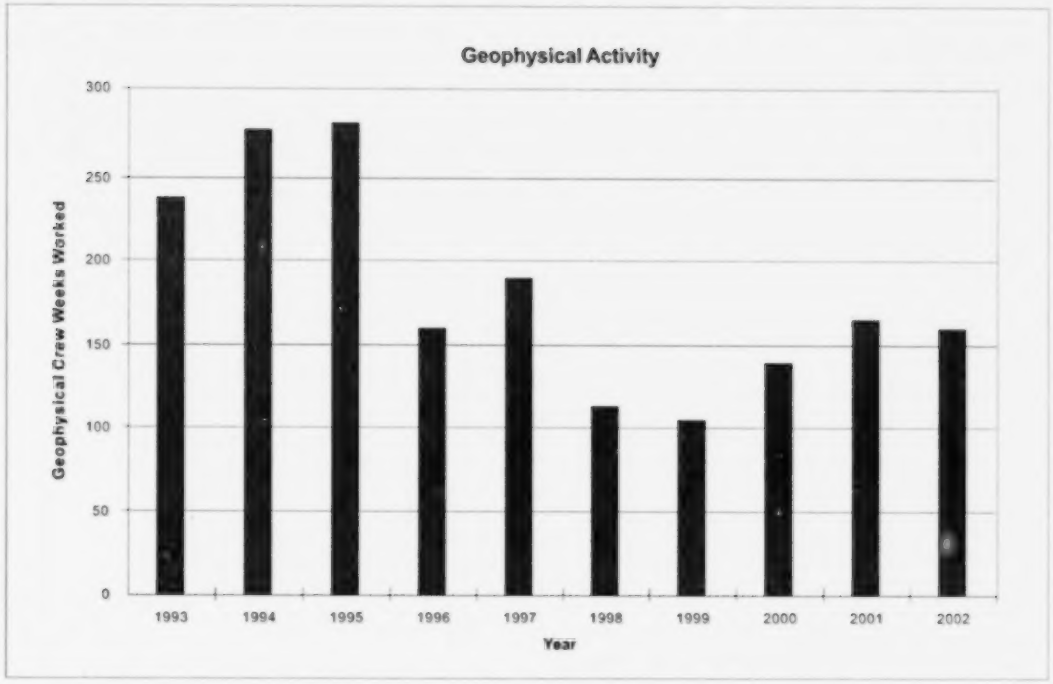


Royalty revenue from oil, natural gas, and related by-products contributed $894 million to the province's coffers. The vast majority of this revenue was realized from natural gas production. Although the gas production volume was at an all-time record high for the province, gas royalty revenue was the third highest seen in the province. Royalties assessed by the Crown are price dependent, and the reduced royalty reflected the softening of the gas markets from the record 2000 and 2001 levels.


Gas Royalties and Production
Royalty ($MM)
Gas Production (10⁶m³)
Year
1200
1000
800
600
400
200
0
30000
25000
20000
15000
10000
5000
0
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
Gas Royalty ($MM)
Gas Production (10⁶m³)

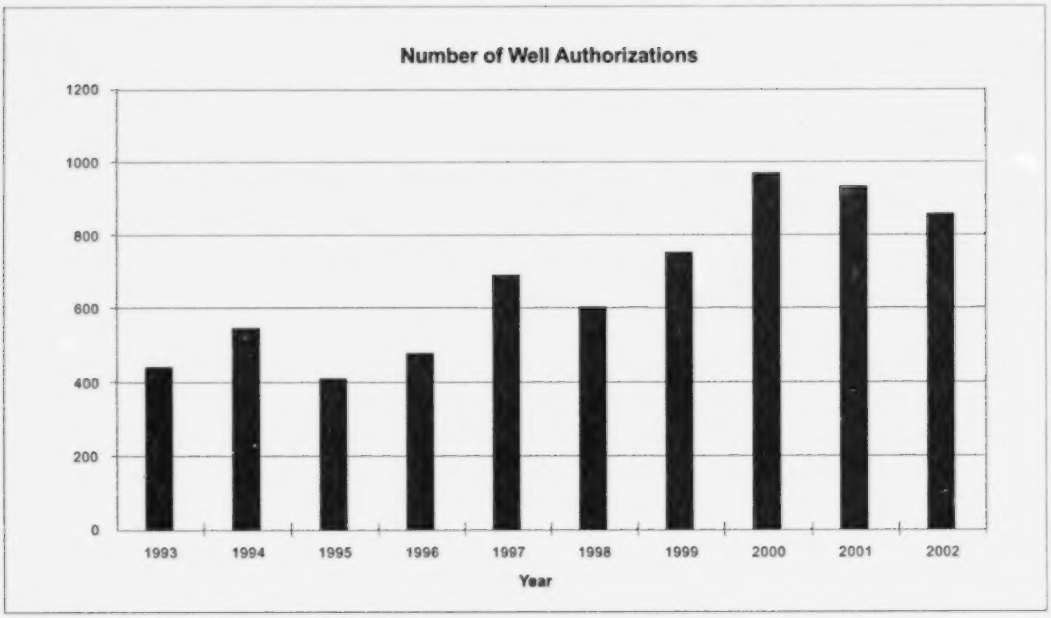

Oil Royalties and Production
Royalty ($MM)
Oil Production (10³m³)
Year
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
3000
2500
2000
1500
1000
500
0
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
Oil Royalty ($MM)
Oil Production (10⁶m³)

Geophysical Activity



Geophysical activity remained relatively high, similar to the levels seen in 2000 and 2001. Increasingly more of the geophysical work consists of three-dimensional (3-D) seismic surveys. While more complicated and more costly, the 3-D surveys allow operators to more accurately depict certain subsurface environments and thereby better identify exploration and development opportunities. The extra cost and effort put into the surveys may be rewarded by increased drilling success, leading to the recovery of resources that would not otherwise be developed.

Well Authorizations



A total of 868 well authorizations were issued during calendar 2002. This represents the third highest annual level of well authorizations issued in the province. Although fewer well authorizations were issued than in either 2000 or 2001, the record year, the 2002 well authorizations continued the high level of activity established in 2000.

Of the 868 well authorizations issued, 484, or 56%, were identified as being for development wells. Three hundred and forty-six, or 40%, were for exploratory outpost wells and 26, or 3%, were for exploratory wildcat wells. The missing 1% were wells for which the classification was not indicated in the records. The percentage of development wells has decreased since the early 1990s when it was typically about 60%. The percentage of exploratory outpost wells has increased from about 30% in the early 1990s. The percentage of exploratory wildcat wells has decreased from about 7% in the early 1990s.

The following table shows the top five operators. These figures were determined by the number of well authorizations issued in 2002.

Operator	No. of Well Authorizations
Canadian Natural Resources Ltd.	155
Encana	113
Burlington Resources	80
Anadarko Canada Corporation	53
Penn West Petroleum Ltd.	46

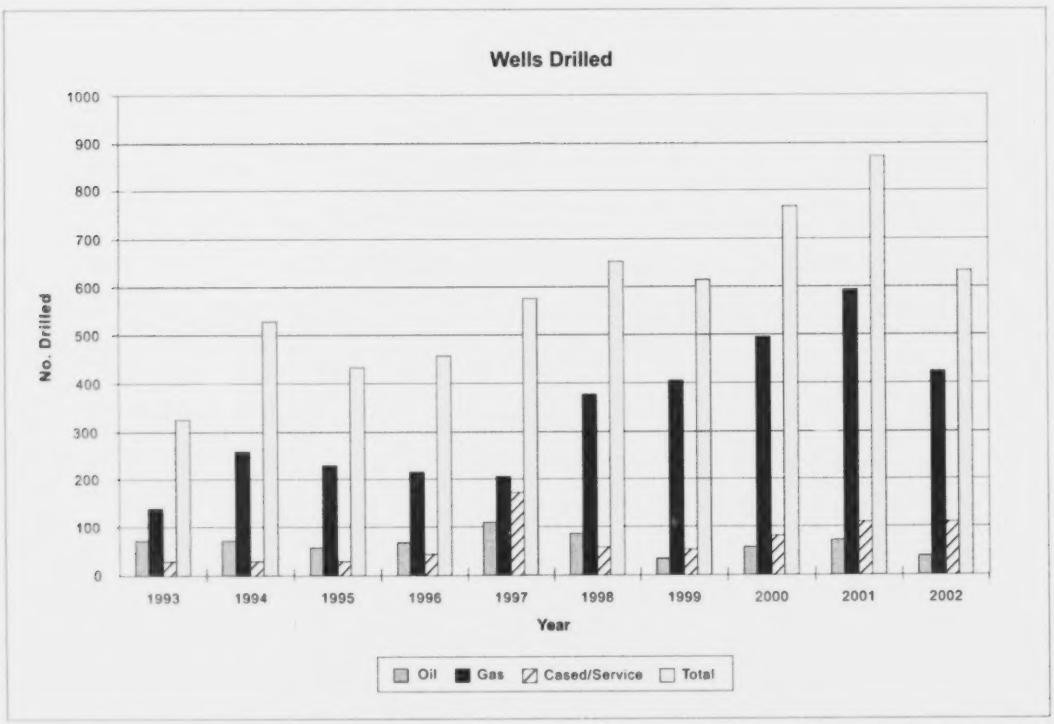
Combined, these five operators received well authorizations for 447 wells, or 51% of the total well authorizations issued during 2002.

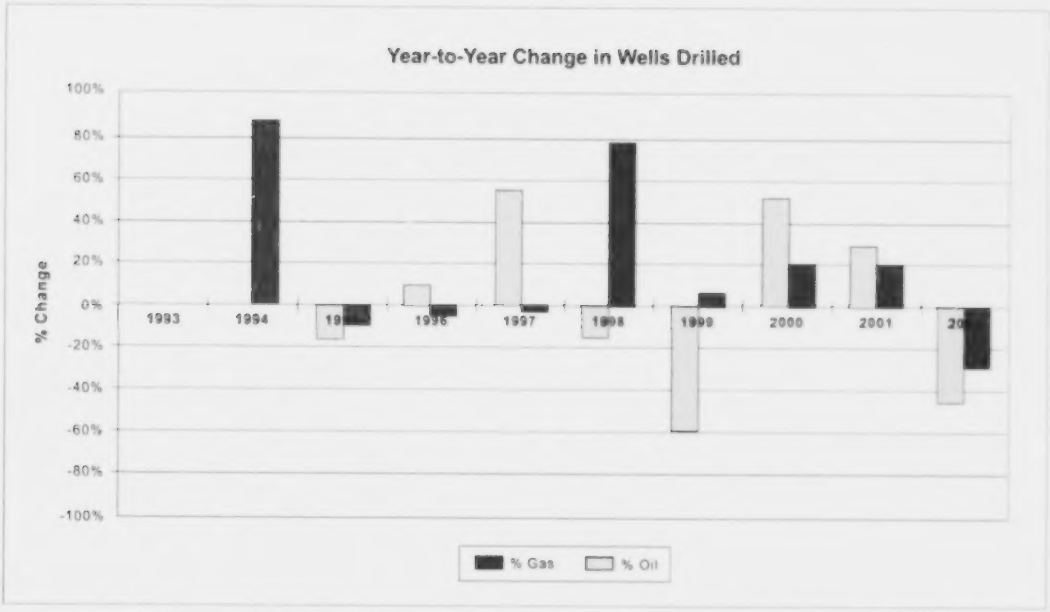
Wells Drilled

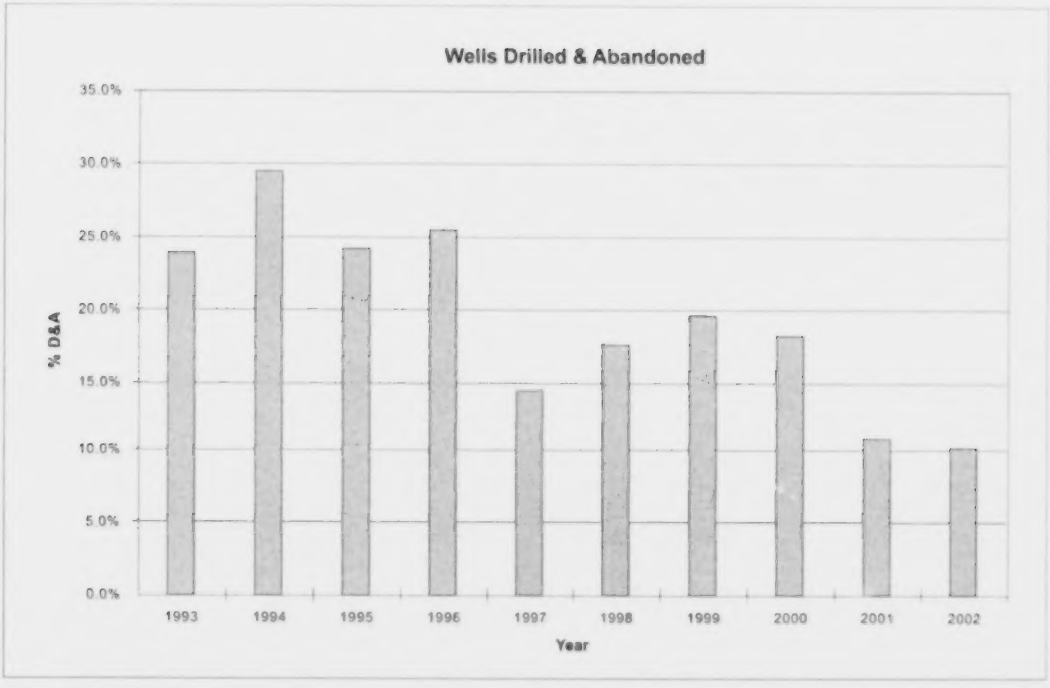
Drilling activity continued at the high levels the province had seen over the previous five years. The majority of the wells drilled were completed as gas wells (427 gas wells out of a total of 643 wells drilled). However, drilling in 2002 did not equal the 2001 record levels, being down 27% in the total number of wells drilled.

Wells Drilled

Year	Oil	Gas	D&A	Cased/ Service	Total
1993	78	140	77	32	327
1994	78	262	154	35	529
1995	65	234	104	35	438
1996	71	221	118	51	461
1997	109	213	83	178	583
1998	93	380	113	66	652
1999	38	405	121	56	620
2000	58	494	137	81	770
2001	75	594	95	111	875
2002	40	427	66	110	643







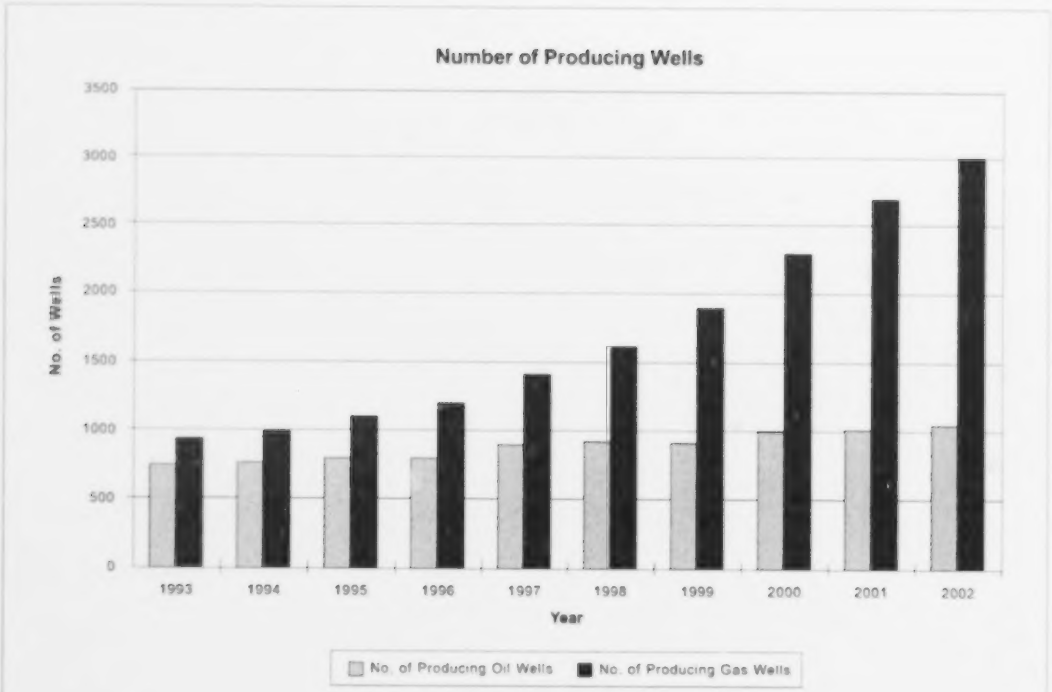
The percentage of wells drilled and abandoned, that is unsuccessful wells, decreased slightly to set an all-time low for the province. The low percentage of drilled and abandoned (D&A) wells may reflect

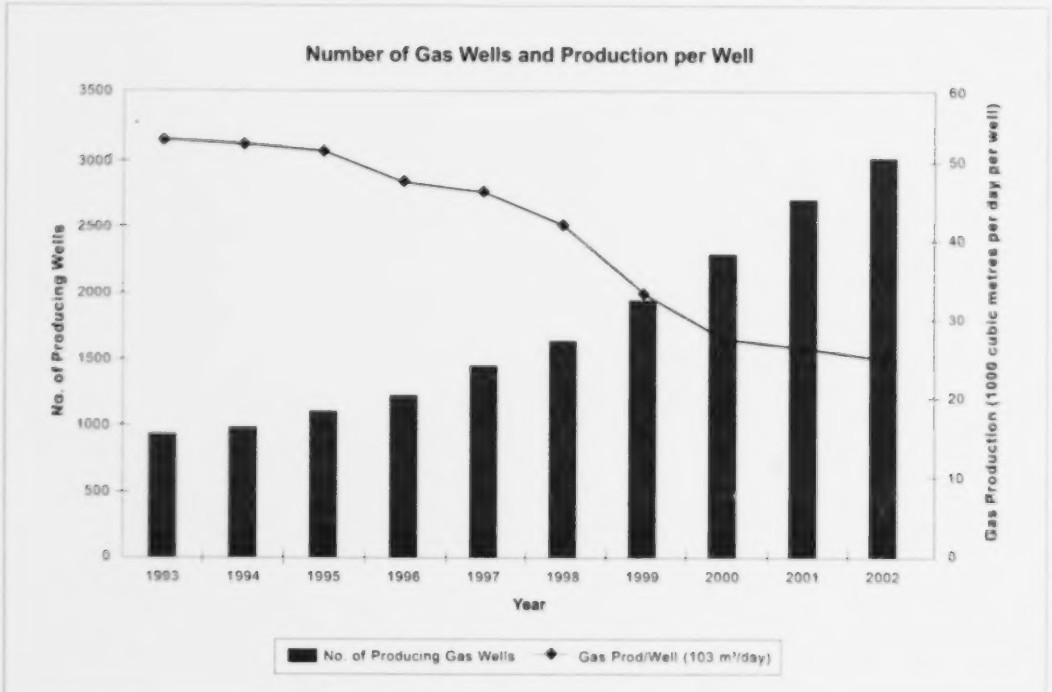
the increasing use of 3-D seismic and other sophisticated exploration techniques to reduce drilling risk, as well as the focus on widespread resource plays such as the Jean Marie development.

Depth Drilled (1000 metres)

Year	Development	Exploratory Outpost	Exploratory Wildcat	Experimental	Total
1993	324	103	99		526
1994	478	202	136		816
1995	342	175	139		656
1996	377	219	129	3	728
1997	505	295	128		928
1998	578	300	95		973
1999	539	311	74		924
2000	706	402	92	4	1204
2001	823	571	110	15	1519
2002	702	399	130	5	1236

The number of wells producing gas increased, continuing a long-established trend. The increasing number of producing gas wells may be reflecting the market demand for gas and industry's 'just in time' approach to developing gas reserves. The increasing number of producing wells does reflect the decreasing deliverability of gas wells in BC.

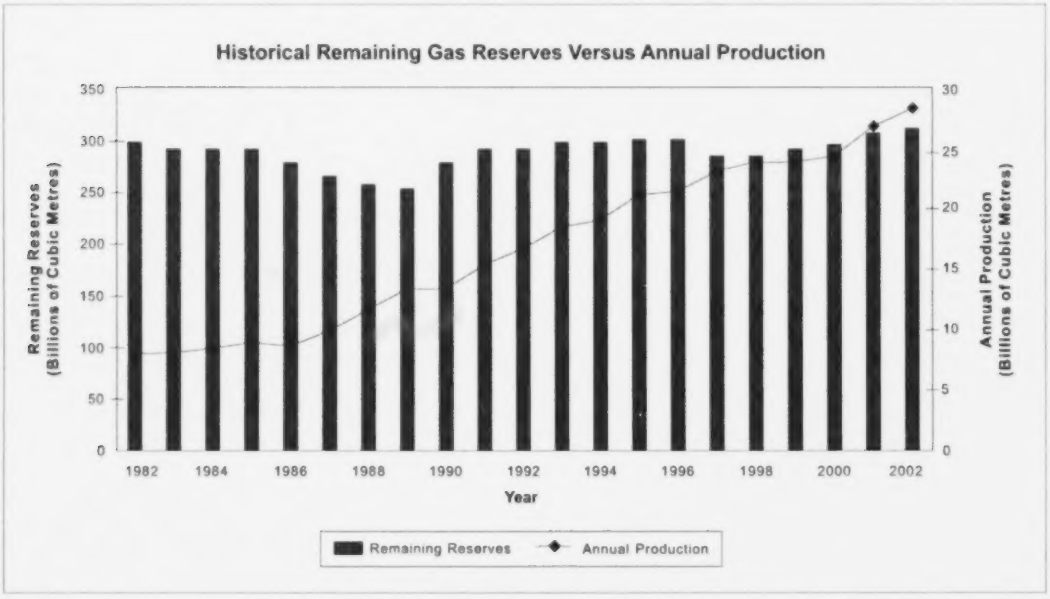

Number of Producing Wells
No. of Wells
3500
3000
2500
2000
1500
1000
500
0
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
Year
No. of Producing Oil Wells
No. of Producing Gas Wells


Number of Gas Wells and Production per Well
No. of Producing Wells
Gas Production (1000 cubic metres per day per well)
3500
3000
2500
2000
1500
1000
500
0
60
50
40
30
20
10
0
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
Year
No. of Producing Gas Wells
Gas Prod/Well (103 m³/day)

Results

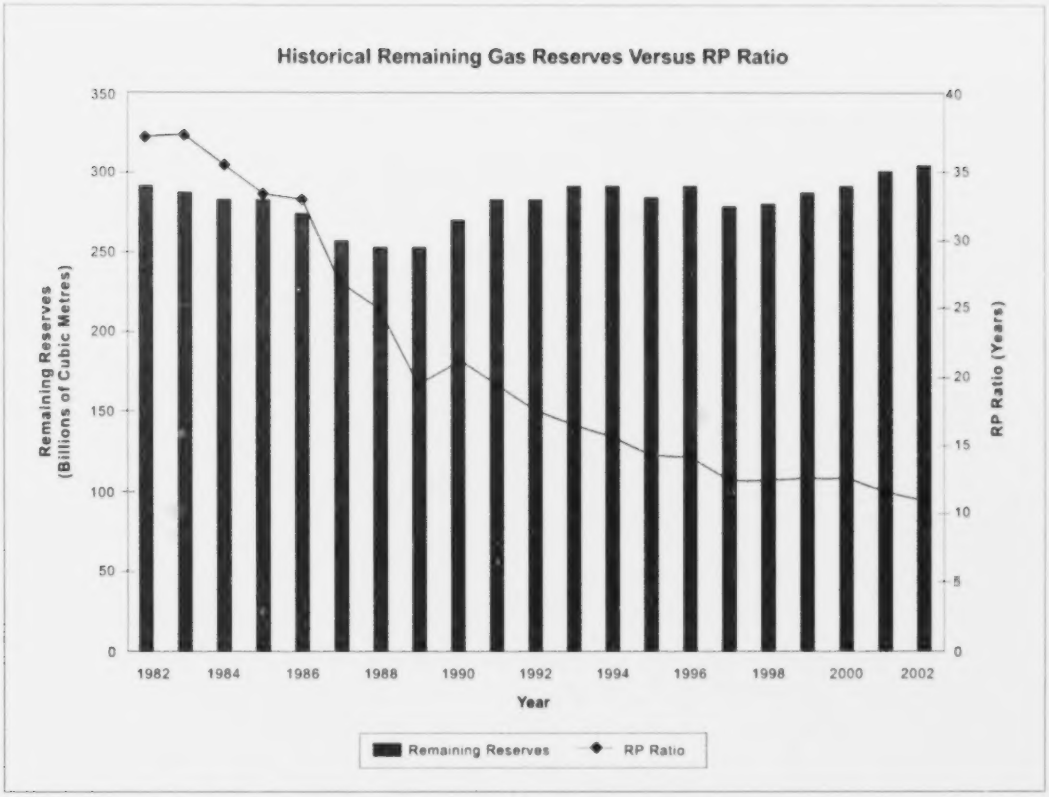
Gas Production and Reserves

The province's established remaining reserves of natural gas were 310.1 10^9m^3 raw, or 254.9 10^9m^3 marketable, as at December 31, 2002. These figures represent the highest level of established gas reserves in the province's history, with a 1% increase over the year-end 2001 raw gas figures giving established remaining reserves in excess of 300 10^9m^3 for a second consecutive year.



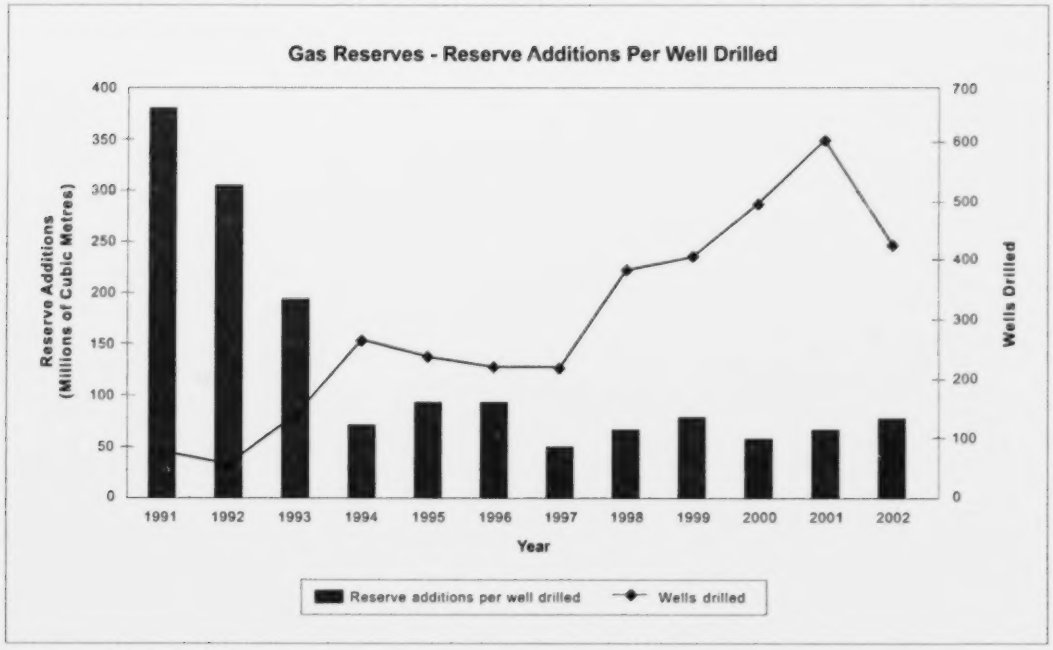
Natural gas production for the year, at 28.3 10^9m^3 raw, was also a record for the province and represents a 7.1% increase over the preceding year's production. The industry's exploration and development activities in British Columbia replaced 115% of this increased level of production.

The 115% replacement of production is slightly better than the ten-year average of 110%, but a considerable decrease from the 147% replacement of production seen in 2001. The 2001 replacement figure was anomalously high due primarily to the booking of large Slave Point reserves at Ladyfern.



The reserves to production ratio (R/P) decreased slightly to 10.9 from 11.6. The decrease in the R/P continues the long-term trend of a decreasing R/P ratio, reflecting both the maturity of the development of the Western Canadian Sedimentary basin (WCSB) in northeastern British Columbia, and the current practice of bringing reserves on production quickly.

The Ladyfern play, developed in 2000 and 2001, in addition to being the most significant gas find in Western Canada in the past 15 years, was the first successful deep Devonian play of its type in British Columbia, and has spurred a search for similar pools. To date, the search has been rewarded with significant Slave Point reserves being found in several areas to the west of Ladyfern. Industry activity aimed at locating additional Slave Point pools is expected to continue. These Slave Point pools are particularly attractive due to the typical high deliverability and significant reserves situated in areas of established infrastructure, giving highly favorable economics.



The Jean Marie formation continues to attract considerable attention, particularly in the Gunnell Creek area. The area saw the drilling of 47 gas wells in 2002 with the Commission booking 415 10^6 m^3 of additional initial reserves. Activity at the start of the 2002/2003 drilling season suggests an even larger number of wells may be drilled in the area during this season as Encana continues its development program.

Performance reviews of several Halfway pools, particularly at Inga, Oak, and Rigel, have resulted in overall reductions in initial reserves. These revisions bring the booked reserves in line with actual production performance. These negative revisions were somewhat offset by the booking of new Halfway pools based on exploratory drilling activity. The new pools, primarily in the Parkland, Laprise, and Boundary Lake areas, are smaller than the Halfway pools typically booked previously. The new pools reflect the maturity of the Halfway play in BC, and also reflect the willingness of industry to invest in 3-D seismic required to locate this resource. Additional activity chasing the smaller Halfway pools is anticipated.

Drilling activity in the South Foothills area has resulted in the booking of significant Baldonnel reserves. Some of the details remain confidential but follow-up activity is expected, particularly in light of the new Kwoen facility and the pipeline accessing transportation in Alberta.

Reserves have been also booked for the Taylor Flats formation in the South Foothills. Again, with the improved access to market for gas in the area, we may be seeing the start of the development of the Permian/Mississippian in the area. The potential for large reserves in the Permian/Mississippian formations is considered high.

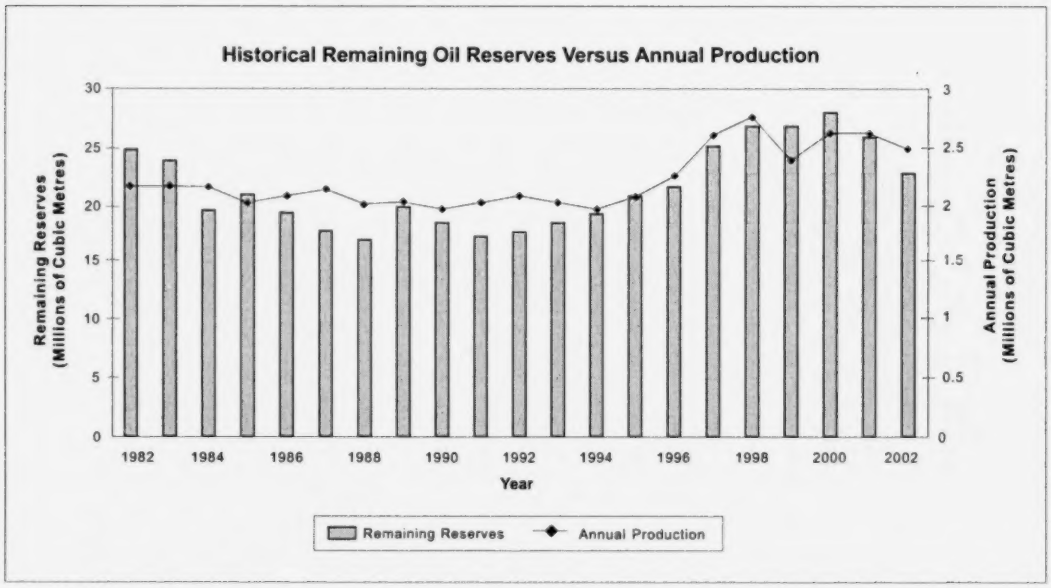
Reserves have also been booked for Debolt pools in both the Tommy Lakes and Thetlaandoa areas. These reserves may be indicative of the start of activity to develop this shallow formation in the large area bounded by Tommy Lakes and Thetlaandoa. Development of the Debolt in these areas could take advantage of, or even support the infrastructure being developed for the Jean Marie.

Established Raw Gas Reserve Changes

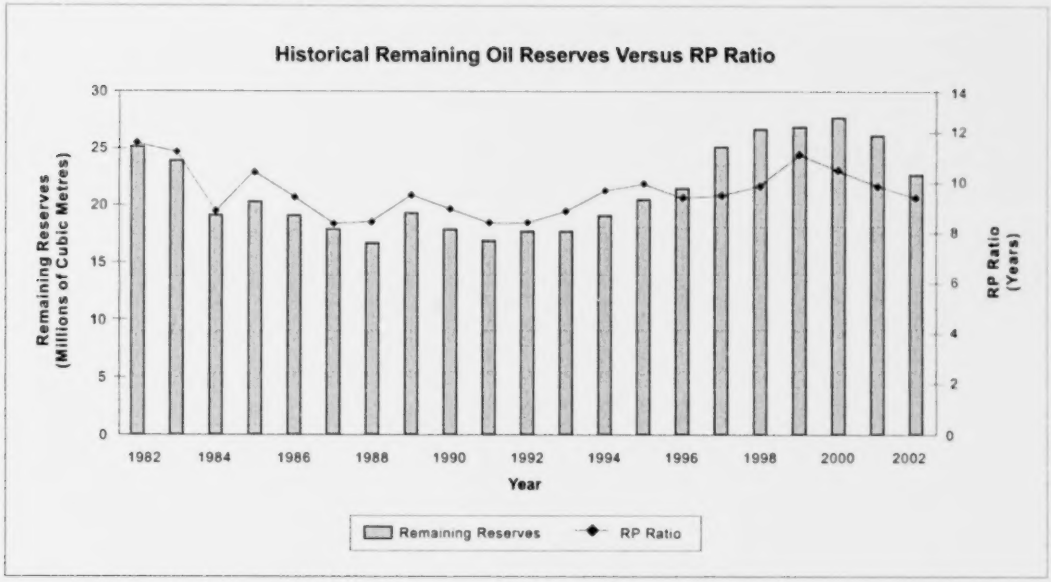
	Change in Reserves (10^9 m^3)
Revisions	13.5
Additions from Drilling	19.0
Total	32.5

Oil Production and Reserves

The province's oil production for the 2002 calendar year was 2.43 10^6m^3, representing a 5.6% decrease from the previous year. Forty oil wells were drilled during the year, a 47% decrease from year 2001 and the lowest oil drilling activity level in the past three years. As of December 31, 2002, remaining oil reserves were 22.3 10^6m^3, showing a 12.5%, or 3.2 10^6m^3, decrease from the previous year.


Historical Remaining Oil Reserves Versus Annual Production
Remaining Reserves (Millions of Cubic Metres)
Annual Production (Millions of Cubic Metres)
Year
Remaining Reserves
Annual Production

The oil production volume and low levels of drilling for oil have resulted in a remaining reserves to production ratio (R/P ratio) of 9.4. This is the second time since 1998 that the ratio has dipped below ten. Oil reserves in the province are contained in the Western Canadian Sedimentary Basin (WCSB), and are concentrated geographically in the Fort St. John area and stratigraphically in Triassic aged sediments within that area. The declining remaining reserves may be an indication of the maturity of the basin.

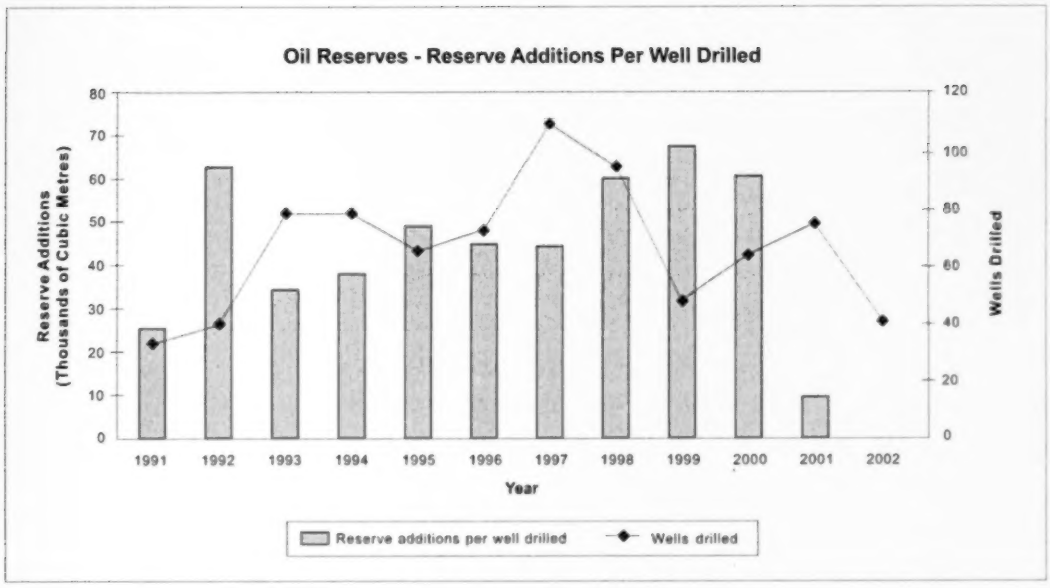


The drilling resulted in the addition of reserves totalling 427 10^3m^3, a considerable increase over the 106 10^3m^3 of reserve additions booked in 2001.

The drilling gave a respectable reserves added per well drilled number of 10.7 10^3 m^3, a significant increase over the unusually low 1.4 10^3 m^3 reserves per well seen in 2001, and more in line with recent long-term average values. Unfortunately, the reserves booked on the basis of drilling, while encouraging, do not appear to identify any significant new potential. Note that the graph on page 18 reports total reserve additions per well drilled, including reserves revisions, which for 2002 were negative and appear as a zero entry.

Performance reviews of the Lower Halfway pools, primarily in the Buick Creek field but including Muskrat, Stoddart West, and Weasel, have resulted in reductions of the remaining reserves.

British Columbia's oil fields continue to be dominated by secondary recovery schemes. Waterflood pools account for approximately 49% of remaining oil reserves with Boundary Lake continuing to be the dominant contributor. Boundary Lake reserves represent 15% of the province's remaining oil reserves.



Established Crude Oil Reserve Changes

	Change in Reserves (10^3 m^3)
Revisions	-1,233
Additions from Drilling	427
Total	- 806

Outlook

Oil and Conventional Natural Gas

Undiscovered Potential

Western Canadian Sedimentary Basin (WCSB)

The ultimate potentials for the WCSB within British Columbia are recognized as 150 10^6 m^3 of oil, and from 1444 10^9m^3 to 1954 10^9m^3 of marketable natural gas. To date, 122 10^6 m^3 of oil and 690 10^9m^3 of marketable natural gas have been recognized as recoverable reserves. Of these initially recoverable reserves, to date 100 10^6 m^3 of oil and 435 10^9m^3 of marketable natural gas have been recovered. The remaining undiscovered potentials for the WCSB within British Columbia are recognized as 28 10^6m^3 of oil and from 754 10^9m^3 to 1264 10^9m^3 of marketable natural gas.

Recent activity resulting in the discovery of Slave Point pools, in significantly distant step-outs from Ladyfern, confirms the potential of the formation and is expected to spur further activity in the relatively unexplored deep formations of northeastern BC.

The foothills region, forming the western limit of the WCSB, appears to be witnessing the beginning of significant exploration. The limited infrastructure in the foothills region and the environmental sensitivity of the region make exploration and development more of a challenge than in the plains areas. The foothills region is expected, however, to contain a sufficient number of large natural gas pools to reward industry's efforts.

Other new reserve bookings suggest industry may be starting to develop the shallow gas resource in areas of northeastern BC previously not extensively explored for shallow potential.

Work by the Geological Survey of Canada (GSC) has also identified significant potential in interior and offshore basins that are, to-date, unexplored. The table below summarizes the potential estimates of the GSC for these basins.

Development of the offshore basins will require concerted effort on the part of the provincial and federal governments to establish an attractive exploratory climate that safeguards the environment and benefits the people of British Columbia. Once such a climate is in place, major financial and resource commitments from industry will be required. As witnessed in the oil and gas developments off the east coast of Canada, large-scale projects with long lead times are required to develop such resources.

Hydrocarbon Potential for Frontier Regions

Regions	Gas (10^9m^3)	Oil (10^6m^3)
Bowser Basin and Whitehorse Trough	386	400
Fernie Basin	11	143
Georgia Basin (onshore & offshore areas)	183	
Nechako Basin	268	810
Queen Charlotte Basin (onshore & offshore areas)	730	1560
Tofino and Winona Basins (offshore areas)	265	
Total	1843	2913

Non-Conventional Natural Gas

Coalbed Gas

Although the coalbed gas (CBG), also known as coalbed methane, potential of British Columbia appears to be exceptionally large, at present none of this potential has been demonstrated to be commercially recoverable. The Commission, therefore, can recognize no CBG reserves.

There has been considerable recent interest by several industry companies in the CBG potential of British Columbia. As of December 31, 2002, the Commission had issued approvals for 11 CBG projects. The approvals are for projects proposed in the southeast part of the province as well as in northeast area (the traditional oil and gas area). There is also interest in the CBG potential of Vancouver Island.

Coalbed Methane Potential

Area / Basin	Potential (10^9m^3)
Western Canada Sedimentary Basin in northeastern BC	1690
Bowser and Nechako Basins	255
Fernie Basin	535
Georgia Basin (includes Vancouver Island)	30
Total	2510